# ABSTRACT

Techniques for incorporating non-pilot symbols along with pilot symbols to improve the estimate of the characteristics (e.g., amplitude and phase) of a communication link. A pilot filter weighs samples corresponding to pilot and non-pilot symbol by different sets of coefficients, which have values determined by and/or corresponding to the confidence in the detected sample. Samples corresponding to pilot symbols are typically associated with higher degree of confidence and are weighted more (e.g., with weights of 1.0). Samples corresponding to non-pilot symbols are typically associated with lower confidence and are weighted with values that may be variable and dependent on the degree of confidence in the samples (e.g., with weights ranging from 0.0 up to 1.0). The weights are updated based on a particular estimator such as a MAP (Maximum a Posteriori) estimator, a MLE (Maximum Likelihood Estimator), or some other estimator.